

# CLINICAL OVERVIEW



## RESTORING WRIST FLEXION/EXTENSION USING PRINCIPLES OF STRESS RELAXATION/STATIC PROGRESSIVE STRETCH

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Many patients develop joint stiffness and loss of motion as a secondary complication to wrist trauma. Two types of loading can be used to permanently lengthen soft tissue and restore ROM: creep-based and stress relaxation.

Historically, ROM limitations have been treated in the home setting using creep-based loading/dynamic splint devices that require 8 to 12 hours per day wear time. Complications include poor patient compliance and skin irritation/breakdown.

The goal of this retrospective study was to verify whether stress relaxation/static progressive stretch (SPS) therapy could significantly increase ROM in patients with wrist stiffness. A secondary goal was to determine if a protocol of 30-minute SPS sessions could improve compliance and reduce complications.

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## Patient Population

- 25 patients with post-traumatic loss of motion at the wrist joint.
- All had plateaued in therapy and failed to gain ROM with other treatment modalities.
- Mean age was 44 years (22 to 72).
- Majority of patients were limited in both flexion and extension.

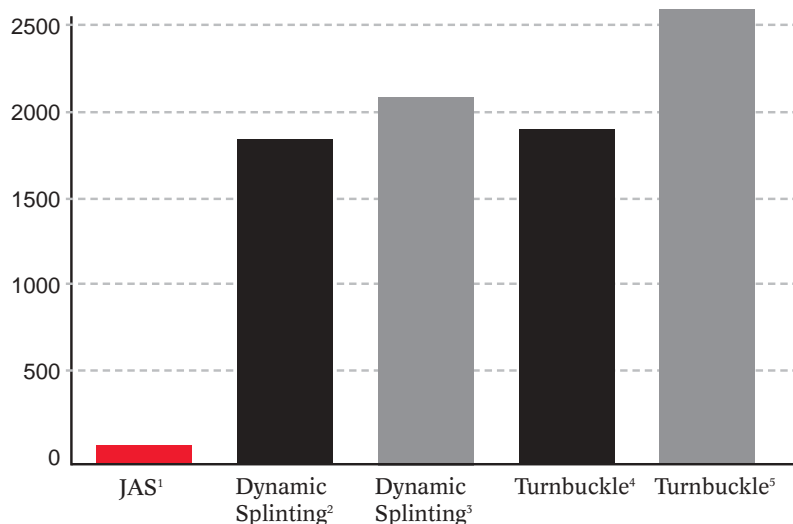
## Materials and Methods

- A JAS Wrist SPS device was prescribed for home use.
- Patients were instructed to perform three 30-minute SPS sessions per direction, per day.
- Patients were regularly evaluated by licensed therapists who independently recorded ROM measurements.

## Results

- Total average increase in ROM was 37° per patient.
- Patients gained an average of 19° extension and 18° flexion.
- Average treatment time was 8 weeks.
- No reports of complications or skin problems with device use.
- All patients completed the suggested treatment protocol.
- The JAS device was effective in restoring ROM using a significantly shorter treatment protocol than creep-based loading/dynamic splinting.

## Total Treatment Time (TTT)



## References

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4. Green DP, McCoy H. Turnbuckle Orthotic Correction of Elbow Flexion Contractures After Acute Injuries. *The Journal of Bone and Joint Surgery* 1979, Vol. 61-A, No. 7.
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Full Study Available. Please contact JAS at 800-879-0117 or [info@jointactivesystems.com](mailto:info@jointactivesystems.com).

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